

From Concept to Reality: Perspectives from an Author of the Pew (Hopkins) Report

**Tom Burke,
Professor and Associate Chair
Department of Health Policy and
Management
Johns Hopkins University
Bloomberg School of Public Health
June 29, 2004
Atlanta**

**What a long strange trip it's
been...**



America's Environmental Health Gap: Why the Country Needs a Nationwide Health Tracking Network

Technical Report

September 12, 2000

Sponsored by:

The Pew Environmental Health Commission
At the Johns Hopkins School of Hygiene and Public Health

Report by:

Environmental Health Tracking Project Team
Johns Hopkins School of Hygiene and Public Health
Department of Health Policy and Management

The Future of Public Health

“The removal of environmental health authority from public health agencies has led to fragmented responsibility, lack of coordination, and inadequate attention to the health dimensions of environmental problems.”

- IOM 1988

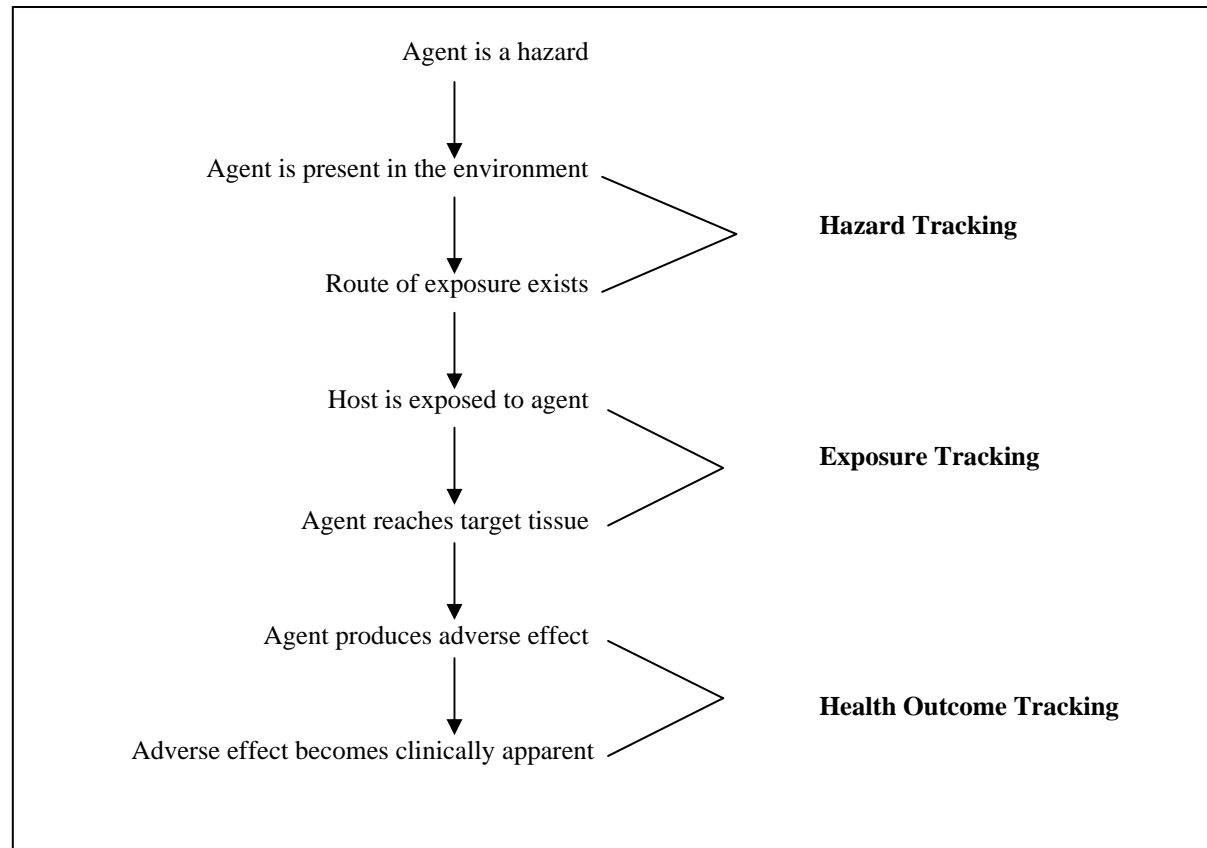
The First Core Function of Public Health

- Assessment
 - Monitor health status to identify community health problems
 - Diagnose and investigate health problems and hazards in the community

Tracking (Surveillance)

- Brings us back to the first core function of public health - assessment
- Provides a foundation for redefining the role of environmental public health
- Has applications throughout all of public health practice and research
- Is a foundation for community prevention efforts and providing the essential services of public health

Environmental Health Tracking



Pew Environmental Health Tracking Project

State / Local Environmental Infrastructure

Interviews of State and Local Leadership

- Capacity
- Needs
- Priorities
- Implementation

National Surveillance Activities

Outreach with Federal Leadership and Review of Federal System

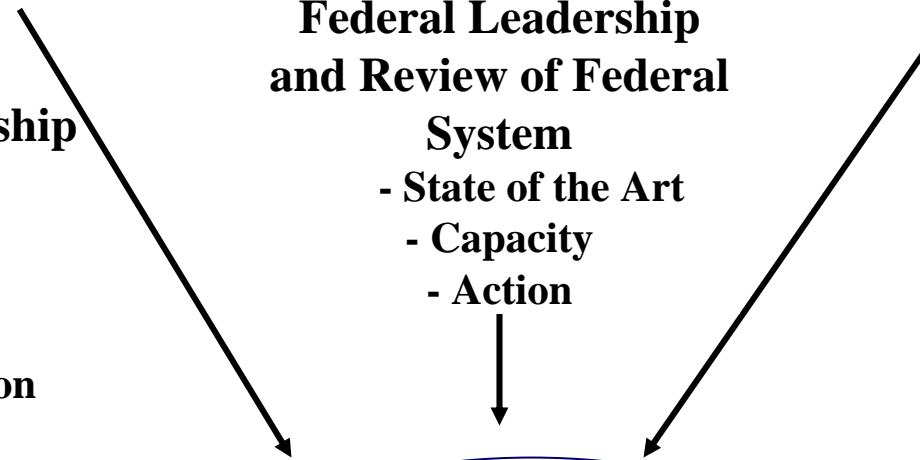
- State of the Art
- Capacity
- Action

Selecting Health Endpoints for Tracking

Examination of Available Information

- Toxics Release Inventory
- Health Endpoints of Concern
- National Health Outcome Databases

National Tracking Recommendations



Conclusions from the states and localities

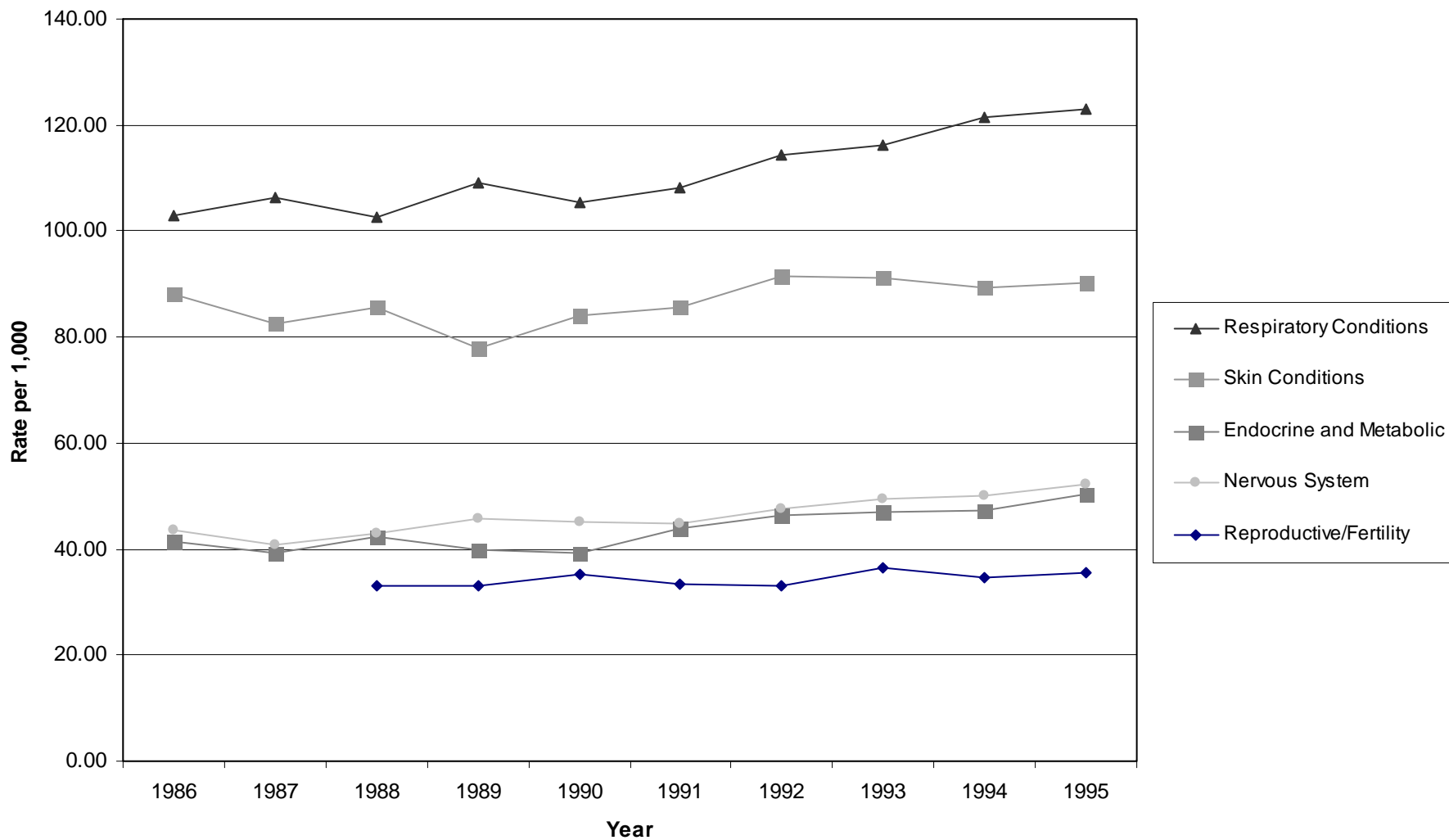
- Guidance and support for state and local capacity building;
- Improved information networks within and across states and localities;
- Increased training in environmental epidemiology;
- Designation of an environmental epidemiologist in every state;
- Increased guidance and technical support on identifying priority health conditions; and,
- Improved capacity to assess population exposures.

Conclusions on Selecting Health Indicators for Tracking

- Potential adverse health effects that have been linked to or influenced by environmental exposures include: respiratory, neurological, skin, liver, heart, developmental, reproductive, kidney, immune conditions, birth defects, cancer, and endocrine disorders.
- An examination of available national data indicates that the reported prevalence of a number of these categories of diseases has been increasing including:
 - endocrine and metabolic disorders (up 21.7%);
 - neurological conditions (up 20%);
 - respiratory diseases (up 20%); and
 - reproductive disorders also increased during this time (up 7.3%).
- Current tracking of these diseases is very limited, and the impact of the environment on their cause or severity is unknown.

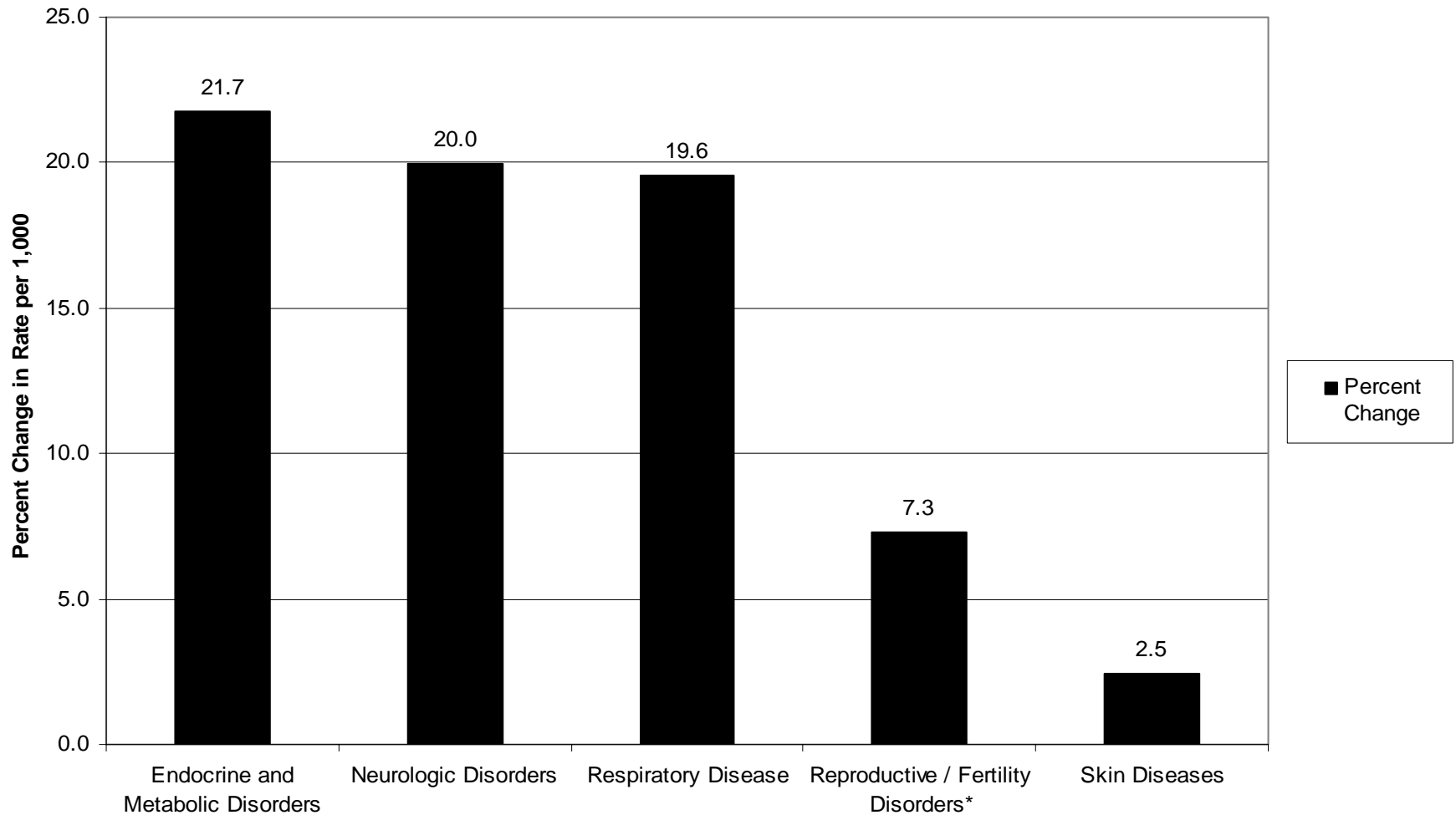
Self-Reported Prevalence for Selected Categories of Disease

National Health Interview Survey, 1986-95*



*Data for reproductive and fertility endpoints were available for years 1988-1995

**Percent Change in Self-Reported Prevalence of
Non-Cancer Chronic Health Conditions
National Health Interview Survey, 1986-1995**



* Change from 1988 and 1995

Recommendations from the Environmental Health Summit

- Coordination of multiple agency efforts at the federal, state, and local level;
- Development of the national environmental health information infrastructure;
- Establishment of minimum performance standards to guide agency-specific tracking efforts;
- Identification of populations at high risk of environmental exposures and adverse health effects;
- Regular reporting of findings and improved public access to information; and
- Strong linkages to prevention.

Recommendations from the Environmental Health Summit (2)

- **A tiered approach to implementation including:**
 - national tracking for high priority outcomes and exposures;
 - a sentinel network to identify acute and emerging hazards;
 - a coordinated network of pilot regional, state, and local tracking programs; and
 - an aggressive research program to guide and evaluate tracking.

Conclusions

- There is currently no cohesive national strategy to identify environmental hazards, measure population exposures, and track health conditions that may be related to the environment.
- Basic information on the incidence and trends in health conditions that may be related or influenced by the environment is largely unavailable.
- Advances in technology provide unprecedented opportunities to understand disease, measure exposures, and provide access to information.
- The Commission calls upon our national leaders to seize these opportunities to revitalize the public health infrastructure and close America's environmental health gap.

Commission Recommendations

The Commission recommends the creation of a Nationwide Environmental Health Tracking Network that informs communities, public health practitioners, researchers, and policymakers on environmental hazards, population exposures, and related diseases and their causes –

- Nationwide baseline tracking of priority diseases and priority exposures.
- Monitoring of immediate health crises such as heavy metal and pesticide poisonings to serve as early warning systems.
- Establishing 20 state pilot programs to allow for the addressing of regional concerns.
- Developing a federal, state and local rapid response capability to investigate clusters, outbreaks and emerging threats.
- Tracking links to communities and research.

Tracking Successes

- Established a new, strong network of environmental public health professionals
- Examined the national data/information resources
- Establishing environmental public health priorities
- Innovative programs, laws, and reporting throughout the states
- Starting a training pipeline
- Advancing the science

Finding the Common Ground

Topic	Tracking Related Initiatives			EPA Indicator Initiatives		
	JHU Tracking Partners ¹	CSIE ²	Pew ³	EPA Draft Report on the Environment	EPA America's Children and the Environment	CSIE/EPA and the Aging (Draft-Do Not CITE) Indicator Topic Areas ⁴
Air quality (ambient) [and respiratory disease]	7	X	X	X	X	X
Asthma (pediatric, all ages)	7		X	X	X	X
Air quality (indoor) [and respiratory disease]	5	X	X	X	X	X
Lead/heavy metals (poisonings)	4	X	X	X	X	X
Water quality (drinking)	3	X	X	X	X	X
Cancer (pediatric, all)	2		X	X	X	
Pesticides	2	X	X	X	X	
ALL	1					
Arsenic (drinking water) [bladder cancers]	1					
Autism	1					
Birth defects	1		X	X		
Housing	1					
Lupus (SLE)	1					
PCBs [developmental effects]	1		X		X	
Mercury (fish)	1		X		X	
Radon [lung cancers]	1					
Toxics, hazardous materials, waste	1	X	X			
UV exposures [skin cancers]	1	X				
Water quality (ambient)/water pollution	1	X				X
Agricultural runoff	0		X			
Disasters	0	X				
Noise	0	X				
Occupational disease	0		X			
Sentinel events	0	X				

¹Preliminary priorities identified through telephone calls and July 2003 EPHT meeting in Chicago

²Council for State and Territorial Epidemiologists, Environmental Public Health Indicators Topic Areas

³Pew - priority topic areas identified by states, represents priority areas for all 49 states rather than specific state partner priorities

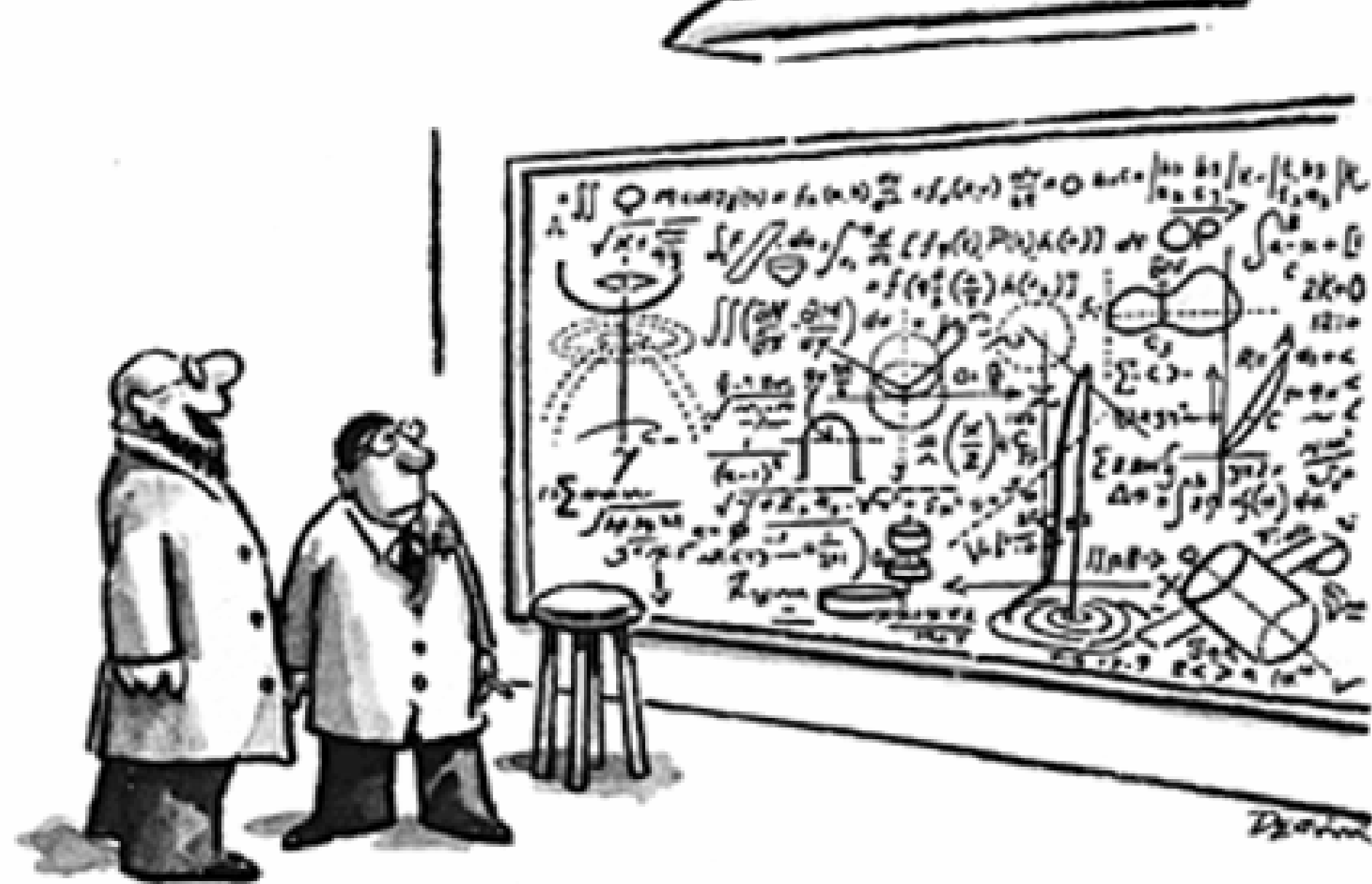
⁴CSIE/EPA workgroup meeting (DRAFT Findings)

Scientific challenges

- **Selecting Indicators**
- **Interpretation of Findings**
- **Refining Tracking Methods**
- **Application to Epidemiological Methods**
- **Cumulative risks**
- **Translation to Prevention and Policy**

Challenges Ahead

- **Efforts are just beginning and there is a long way to go**
- **Fragmentation... still**
- **Leadership**
- **Involving Communities**
- **Sustainability**
- **Communication of Findings**
- **Getting the Data Out**
- **Applications to Prevention, Regulation?**



"Hey, no problem!"

So, how are we doing

- There has been amazing progress in a very short time
- Tracking is leading to fundamental changes in the national approach to environmental health
- Many Pew recommendations are now reality
- If you don't believe me Google EPHT!
- There is still a long way to go
- Our challenge is to build the support through results, partnerships, resources, and support.

